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Horizontal chamber die casting process, for aluminum and magnesium alloys, comprises forming a stabilized homogenized cylindrical melt volume for feeding and additional compression of the solidifying cast product

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Patent Family:

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EP 1046444	A1	20001025	EP 99107814	A	19990420	200061	B
BR 200001645	A	20001031	BR 20001645	A	20000419	200061	
JP 2000312958	A	20001114	JP 2000111666	A	20000413	200062	
CN 1270863	A	20001025	CN 2000106494	A	20000411	200104	
KR 2000071729	A	20001125	KR 200020552	A	20000419	200131	

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Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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BR 200001645	A	B22D-017/00
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JP 2000312958	A	8 B22D-017/02
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CN 1270863	A	B22D-017/10
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KR 2000071729	A	B22D-017/00
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Abstract (Basic): EP 1046444 A1

Abstract (Basic):

NOVELTY - A horizontal chamber die casting process comprises forming a stabilized and homogenized cylindrical melt volume for feeding and additional compression of the solidifying cast product in the die.

DETAILED DESCRIPTION - A horizontal chamber die casting process comprises applying a vacuum to the chamber and piston, accelerating the melt before entry into the die and subjecting the die to pressure before or when the melt reaches the ingate opening. Before acceleration, the melt is formed to a cylindrical shape which is retained until achievement of hydrodynamic stabilization, temperature equalization and uniform pressure distribution in the cylindrical material volume and which is fed into the solidifying metal after filling of the die to provide additional compression during solidification of the cast product.

USE - For die casting of aluminum and magnesium alloys.

ADVANTAGE - The process provides die filling with a hydrodynamically equalized melt flow and cast product solidification under an additional compaction pressure without dispersal of the stream entering the die.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of a die casting machine.

- melt container (1)
- suction tube (2)
- T-shaped casting chamber (3)
- die cavity (5)
- die halves (6, 7)
- casting piston (8)
- counter-pressure piston (9)
- compression piston (10)
- melt (13)

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